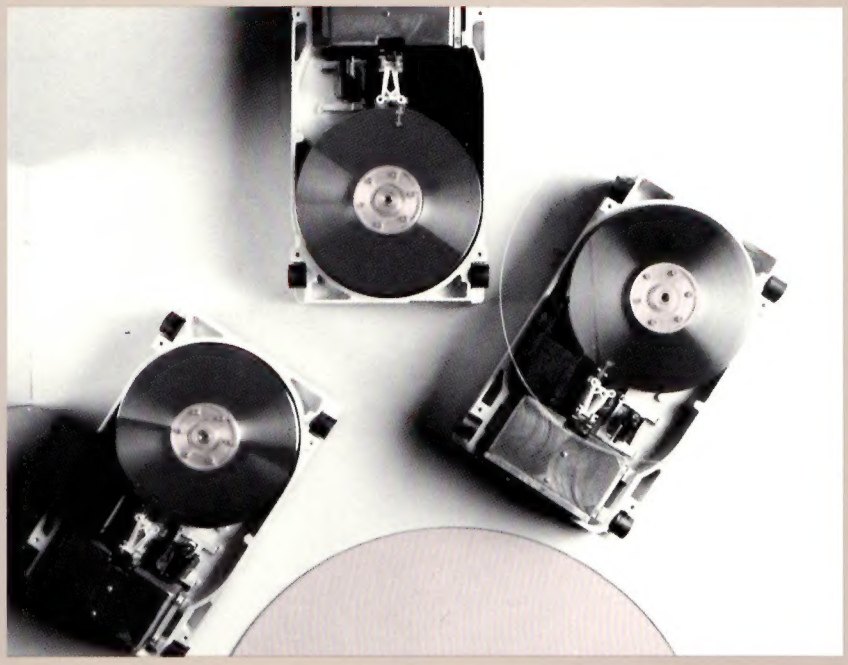
806
807
808



PRIAM ADVANCED 800 SERIES DISK DRIVES: 227, 344 AND 516 MB

PRIAM, the leader in 8" voice-coil technology, presents the **806, 807** and **808** disk drives, the powerful PRIAM family of Advanced Series 8" disk drives.

HIGH CAPACITY High capacity in a small package is a standard feature of PRIAM's Advanced 800 Series Winchester disk drives. The **806** offers 227 MBytes of unformatted storage capacity, the **807**, 344 MBytes, and the **808**, 516 MBytes, each in an 8" "floppy" package.

EASY INTEGRATION The interfaces available for the **806, 807** and **808** include SMD and SCSI. The **806** and **807** also support the PRIAM interface.

PRIAM's Advanced 800 Series disk drives allow the benefits of using an imbedded SCSI interface in small microprocessor-based systems requiring high-capacity, high-performance disk drives.

SCSI is an emerging standard for optimized system integration, as it frees your system from device-unique characteristics, such as head and track identification.

Disk drive model **808** also features an extended SMD interface for high performance and fast data transfer.

HIGH PERFORMANCE At 20ms average access time for the **806**, 25ms for the **807** and 20ms for the **808**, these drives offer increased capacity, and the speed to complement multi-user, multi-tasking applications.

ADVANCED TECHNOLOGY In the **806, 807** and **808** Winchester disk drives, PRIAM offers the benefits of advanced linear voice-coil technology in a package size appropriate for integration into today's smaller multipurpose systems.

RELIABILITY PRIAM builds every 800 Series drive with features designed for optimum reliability. Dedicated head landing zone, carriage and spindle lock, and shock mounts guard against accidental damage.

For enhanced performance and for easy field replacement of components, all drive electronics are external to the head disk assembly, and are contained on only two full size printed circuit boards.

PRIAM's products incorporate high BPI and TPI designs with optimized read channels that lead to disk drives with improved window margins, and a resulting increase in data reliability.

HIGH QUALITY All PRIAM disk drives are designed and produced in San Jose, California. Our fully automated manufacturing facility produces high volumes of high quality disk drives. In-house domestic design and manufacturing keeps the product close to the customer, and reduces time to market for new product offerings.

PRIAM®

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PERFORMANCE SPECIFICATIONS

	806	807	808
Capacity, unformatted			
Per drive (MB)	227	344	516
Per surface (MB)	20.6	31.3	43.0
Per track (Bytes)	20,160	20,160	30,240
Transfer Rate (MBytes/sec)	1.21	1.21	1.81
Access Time* (msec)			
Average	20	25	20
Track-to-Track	5	5	5
Maximum	40	50	45
Average latency (msec)	8.33	8.33	8.33

*Includes settling

FUNCTIONAL SPECIFICATIONS

	806	807	808
Rotational speed (rpm)	3600	3600	3600
Recording density (fcpi)	9157	12,096	12,794
Bit density (bpi)	9157	12,096	17,059
Track density (tpi)	1040	1040	1040
Cylinders	1023	1552	1422
Data heads	11	11	12
Servo heads	1	1	1
Disks	6	6	7
Recording code	MFM	MFM	RLLC
Available interfaces	SMD PRIAM SCSI	SMD PRIAM SCSI	ESMD SCSI

DC POWER REQUIREMENTS

	Model/ Interface	Maximum	Typical
+24 VDC (±5%)	All	7.0A seeking/ starting	2.5A non-seeking
+5 VDC (±5%)	PRIAM/SMD	2.2A	1.7A
	SCSI	6.5A	5.5A
−5 VDC (±5%)*	806,807/PRIAM	2.2A	1.7A
	806,807/SMD	3.3A	2.6A
	806,807/SCSI	2.2A	1.7A
	808/PRIAM	2.9A	2.3A
	808/ESMD	4.0A	3.2A

RELIABILITY SPECIFICATIONS

	806	807	808
MTBF (power-on hours)		15,000	
Preventative maintenance		None	
MTTR (minutes)		30	
Error rates:			
Soft read errors		1 per 10^{10} bits read	
Hard read errors		1 per 10^{13} bits read	
Seek errors		1 per 10^{6} seeks	

PHYSICAL SPECIFICATIONS

	806	807	808
Environmental limits:			
Ambient temperature:			
operating		10–45°C	
non-operating		5–60°C	
Relative humidity:			
operating		8%-80%, non-condensing	
non-operating		8%-90%, non-condensing	
Altitude, operating		12,000 feet	
Heat dissipation		85 watts, typical	

DIMENSIONS

	806	807	808
Height (inches)		4.62	
Width (inches)		8.55	
Depth (inches)		14.25	
Weight (pounds)		25	

SCSI INTERFACE FEATURES (806 AND 807 ONLY)

Data integrity optimized due to automatic assignment of flawed sectors during FORMAT (using the factory prepared defect map) and automatic error recovery during all commands.

An 8K buffer supports extended transfers.

Data references are made to logical blocks, and the net usable capacity depends on block size, as follows.

Block size	Number of logical blocks		Net capacity (MB)	
	806	807	806	807
256	597,025	1,092,520	152.8	279.7
512	321,475	588,280	164.6	301.2
1024	165,330	302,544	169.3	309.8

Upgrade path from current 5-1/4" Winchesters to high-performance 8" Winchester drives.

(Specifications are subject to change without notice)

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PRIAM designs and produces advanced disk drives, intelligent interfaces and storage systems.

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